Mobility Options Implementation Plan

Issue #1: Gaps in Service

An obstacle inherent in the examination of service gaps is that service holds different meanings at different levels of interaction: State, Jurisdiction, Transit System, and Passenger.

State Level

- Previously, a state level goal was to establish some level of service in each county in Michigan. The emphasis could now shift to connectivity.
- Is travel from a given location to distant parts of the state available as a public transportation option?
- Is travel from a given location within a jurisdiction to a destination outside of that jurisdiction available as a public transportation option?
- Is travel from a given location within a jurisdiction to all destinations within the jurisdiction available as a public transportation option?
- Is travel from a given location within a jurisdiction to the facilities offering other modes of transportation, (Airport terminals, rail stations, intercity bus stations, ferry operations), available as a public transportation option?
- Are different mode choices available for a given trip?

Jurisdiction Level

- Jurisdiction level analysis is a function of infrastructure commitment, policy, funding, and public and business level support.
- Is the available transit service cost beneficial for the jurisdiction?
- Is the operation of the transit service "low maintenance" for the jurisdiction with respect to on-going administrative intervention (system or service complaints)?
- Is the community supportive of the transit system and available service?
- If the transit system is financially supported by a millage, is the community supportive of millage renewal?
- Are the transit riders supportive of the system and available service?
- Is the business community supportive of the system and available service?

Transit System Level

- The Transit System level analysis focuses on the design and implementation of service.

Fixed Route

Standard for an Area Serviced:

- The population within a ¼ mile walking distance of the nearest bus stop defines the area served by a given route. Route systems should include service to all major employers, hospitals, schools, retail business centers and public housing.

Standard for a Park and Ride Lot Area Served:

- Population within a two mile radius taking into consideration natural and man made barriers.

Route Directness:

- The "Coefficient of Directness" is computed by dividing the travel time by transit between two major generators by the travel time by automobile between the same two locations. This should not exceed 1.75 as per industry standard.

Standard for Passenger Stops locations:

- 7 to 8 stops per mile in the downtown area
- 3 to 6 stops per mile in areas outside of the downtown

Standards for Route Spacing:
Route Spacing Guide
Density (Persons per Square Mile)

Automobiles per household	Over 5,000	2,501 to 5,000	1,000 to 2,500	Under 1,000
Under 0.40	¼ Mile	¼ Mile	3/8 Mile	½ Mile
0.40 to 0.80	¼ Mile	3/8 Mile	½ Mile	1 Mile
0.80 to 1.50	3/8 Mile	½ Mile	1 Mile	*
1.51 to 2.00	½ Mile	½ Mile	*	*
Over 2.00	1 Mile	*	*	*

Consideration is given in areas where bus service is provided and the population density and automobile density are not of a level sufficient to support bus service. In many cases these areas are where major trip generators (hospitals, shopping centers, social service centers, schools, etc.) are located.

When examining a system's routes, considerable gaps in service may not readily be observable and analysis of the composition of the area population is warranted. Seniors, the disabled, and even the non-disabled may not be able to travel to a bus stop. Distance is not the only factor. Cold, heat, pollen count, snow, rain, and road construction are a few of the conditions that might prevent access.

Standard for Hours of Operation:
The hours of operation should be based on demand and related to route function. The routes that operate the least amount of time should operate at, or greater than a level of 64% of the maximum service span.

Standard for Route Frequency:
Operating frequencies are defined by demand and vehicle load.

- Peak – 15 to 30 minute
- Base – 30 minute
- Reduced – 30 to 60 minute
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Standard for Layover:
Maximum of 7% of total cycle time

Loading Standard (Seating Availability):
This standard is calculated by dividing the total number of passengers passing the maximum load point by the number of seats passing the maximum load point during the operating period under consideration. This is an average so individual trips may exceed the standard, but should not exceed the standard by more than 15 minutes.

Tripper or Trailer Bus Standard:
Tripper Buses are added to transit routes when passenger demand on scheduled trips exceeds the safe capacity of the vehicle, when time schedules are not being met due to unforeseen circumstances, (including accidents, vehicle breakdown, and wheelchair lift malfunction), and there is a delay in the next scheduled vehicle that exceeds 30 minutes. The addition of a tripper is triggered by a combination of these factors.

Passenger Amenities and System Information
Standards for Bus Shelters and Benches:
Bus stops with more than 25 passenger boardings on a daily basis should have a bus shelter. Benches should be provided at bus stops with more than 10 passenger boardings per day.

Standard for Pole Schedules:
Pole schedules should be placed at:

- All newly established bus stop locations
- Shelter and bench locations
- Timepoints listed on the published timetables
- Where two or more bus routes intersect

Standard for Published Schedule Availability
Route and Time Schedules should be available on each vehicle and at significant system identified trip generator throughout the service area.

Standards for Vehicle Identification Signs:
Identification signs should display the route, and the direction the bus is traveling at all times.
Vehicles in excess of 22 feet in length, used in multiple-stop, fixed-route service, shall be equipped with a public address system permitting the driver, or recorded or digitized human speech messages, to announce stops and provide other passenger information within the vehicle.

Standard for Elderly and Disabled Passenger Seating:
Bus seating for elderly and disabled passengers shall be designated and signed, ("Reserved for Elderly and Disabled Passengers").

Standard for Accessibility:
All transit vehicles and facilities should be equipped for and accessible to disabled persons as required by the Americans with Disabilities Act of 1990, and as amended.

Route Productivity Standards:
Two categories of services are defined for the purpose of analyzing route productivity: existing service and new service. Existing service is service that has operated continuously for more than two years. New service is defined as service that has operated continuously for two years or less. New service is monitored for performance for two years prior to productivity analysis. Once the two year threshold has been achieved, analysis spans three consecutive months.
Within a given system, route productivity should be at a level equal to or greater than 50% of the system wide average from a given transit mode, (Radial Routes, Crosstown Routes, Express, and Connector Services) for three consecutive months. This standard considers Passengers per revenue Hour, Passengers per revenue Mile, Farebox Recovery Rate, and On-Time Performance.
Routes that significantly exceed the standard should be considered for additional service or service frequency. Routes that perform below the standard should be scrutinized for ways to improve productivity, considered for redesign or evaluated for service elimination.

Standards for On-Time Performance:
A critical success factor for Fixed Route operation is the availability of convenient and consistently reliable route transfer. Riders expect service that will enable them to board a bus a scheduled. Routes with unsatisfactory on-time performance should be candidates for corrective action.

Route Performance	**Percent of Trips, by Route, that are late by 5 minutes or less**
Exceptional	Greater Than 90%
Good	90%
Satisfactory	85 – 89%
Marginal	80 – 84%
Unsatisfactory	Less than 80%

On-Going Evaluation:
On-going evaluation based upon the standards should relate to internal and external reporting requirements, however, comparisons with the previous month, same month of the previous year, and with a two or three year running average should be included to identify trends.
Comparison must consider the number of days in a given month across years. Analysis should also be sensitive to and conducted separately for the provision of service on a weekday as opposed to a weekend day. Ridership productivity is considered as a function, (trips per revenue mile or revenue hour), rather than a static passenger count.

ADA Paratransit Service Area
Complimentary paratransit service must be provided to all origins and destinations within the service areas defined by a corridor centered on the fixed route and extending ¾ of a mile to either side of the route. Paratransit eligible passengers do not need to reside in these areas to be eligible for service as long as they make trips within the defined area.

Response Time
Response time is defined as the elapse time between a request for service and the provision of service. Next day service is required. Reservations must be taken during those hours when the administrative offices are open. Arrangements must be made to accept reservations on days that the administrative offices are closed if service is provided on the following day.

Fares
Fares charged for complimentary paratransit serve can be no more than twice the full fare for a comparable trip made by a person without a disability on the fixed route system.

Trip Purpose
Requests for all types of trip purpose must be accepted and handled on an equal basis. Prioritizing trips – meeting demand for certain types of trips before accommodating others – is not permitted.

Hours and Days of Service
Complimentary paratransit service must be offered during the same days and hours that the fixed route system is in operation. This includes times when the fixed route is on a limited schedule, such as Sundays, holidays, or evening or early morning.

Capacity Constraints
Public entities are prohibited from limiting the amount of complimentary paratransit service provided to ADA paratransit eligible persons. The service must be provided so that their patterns are practices that result in substantial numbers of untimely pick-ups; trip denials; missed trips; or excessively long trips.

Demand/Response & Specialized Services
Gaps in Demand/Response categories of service are substantially parameter driven. Availability of service, (on the day, at the time, in the area, and to the destination of travel), is a real key. Vehicle type matched to the individual's physical characteristics and requirements is a critical factor, as is the level of service assistance that is available.

Population Served
- Public Transit
- Program/Client Specific

Convenience Trip Reservations (minimum)
- Advance Reservation
- 24-Hour
- 48-Hour
- Set Days or Time Period Only
- Same-Day (True Demand/Response)

Reservation Window (maximum advance)

- One Day
- Up to a Week
- One week
- Up to Two Weeks
- More than Two Weeks

Reservation Consistency

- Reservation Accepted as Requested
- Negotiated Time Frame

System Constraint

- Trip Time Available as Requested
- Alternate Time Offered
- No Trip Available

Types of Service Offered

- Curb-to-Curb
- Door-to-Door
- Door-through-Door
- Escorted
- Exclusive Wse (Single Occupancy)
- Shared Ride

Days of Availability

- Week Days
- Saturday/Sunday

Hours of Availability

- Business Day
- Evening Availability
- Night-Time Availability

Area Served

- Single Jurisdiction
- Township
- City
- Multiple Jurisdictions
- Countywide
- Multiple Counties
- Regional

Level of Deboarding/Boarding Assistance

- Lift Operation
- Mobility Equipment securing
- Stairway
- Seating/Standing

On-Time Performance

- Destination Arrival as Scheduled
- Return Trip Departures as Scheduled

Travel Time

- Travel time takes into consideration distance, share ride requirements, unique passenger characteristics and system features. The maximum travel time would be comparable to the fixed route standard; no more than 1.75 times the travel time by automobile to the between the same two locations.
- Reasonable
- Excessive

Trips Not Served

- Trips not Scheduled
- Missed Trips

Comfort

- Appropriate Vehicle Type – Passenger/Vehicle Match
- Cleanliness
- Equipment Maintenance
- Smooth Vehicle Operation
- Passenger Sensitivity Training

Safety and Security

- Dispatch/Driver Communications & Emergency Communications
- On-board Safety Equipment and Training
- Vehicle Evacuation Plans
- Defensive Driver Training
- Driver Attitude and Passenger Perception

Cost of the Fare

For the customer, the fare is relative to the cost of the alternate services that are available in the service area for a given trip, the customer's estimation of affordability, the customer's sense of service value, and service convenience.

Passenger Level

Transit systems do a reasonable job of marketing their operation attributes. The information provided is also available in sufficient format (Spanish, large print, audio version, Braille), for use by a diverse population. However, transit providers may underestimate the passenger's access to, and demonstrable understanding of the system information.

Customers generally focus upon their circumstances with the expectation that the transportation service will be able to fulfill their specific needs. Customer expectations are a useful source for the identification of Gaps in service.

Analysis here ties directly back to Issue # 2: Perception of Poor Service. The Quality of Service Evaluation Framework provides a good test of the adequacy of service design from the passenger's perspective.

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http://www.ltrc.lsu.edu/TRB_82/TRB2003-000179.pdf

3. Kenneth L. Casavant, and Kathleen M. Painter, Demand Forcasting for Rural Transit, Final Report TNW August 1998
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4. Urbitran Associates, Inc., PLS Associates, Inc., CJI Research, AJM Consulting, Raleigh Five Year Transit Plan, July 2003
http://www.raleigh-nc.org/transit/Final_Plan_Executive_Summary_7-2003.pdf

5. SG Associates, Inc., Leigh, Scott & Cleary, Inc., and C.M. Research, Inc.,
TCRP Report 3: Workbook for Estimating Demand for Rural Passenger Transportation, TRB, Washington, DC, National Academy Press (1995)
http://www.fta.dot.gov/library/reference/95ftabib.html#tcrp%20report%203

6. Americans with Disability Act of 1990, and as amended
http://www.usdoj.gov/crt/ada/pubs/ada.

Issue #2: Perception of Poor Service

Tasks:

1. Work plan for survey and identification of groups to be surveyed

In order to determine what the perceptions of poor service are, it has been determined that a survey of both users and non-users of the transportation system must be performed. While the execution of such a survey (or surveys) is beyond the scope of what the action team can do, there are "deliverables" which include: 1) defining what needs to be done (e.g., identification of tentative survey populations); and 2) development of a draft survey instrument (or instruments). The work plan that follows is an outline of the tasks that need to be performed so that the "right questions" are asked of the "right groups." The work plan is presented in priority order. It is proposed that the first and second priority tasks will be done by the mobility options action team, while the third and fourth priority tasks will need to be done (later) by other agencies/institutions. The immediate goals here are to identify those who should be contacted, provide a draft of the survey instrument(s), and develop some idea as to how to contact the chosen groups. A tentative list of groups that should be contacted to participate in the survey is provided. These groups include the general public (users and non-users) and organizations/institutions that are transportation origins, destinations, providers, or some combination of these. The organizations may also be part of the audience for the survey results. Local (Lansing-area) examples are given for some types of organizations.

At this point, the views of the sub-group have been solicited (no response) and we are now soliciting feedback from the mobility options group as a whole. The overarching question is: Is this what we need to be doing for this issue? That is, we are looking for "buy in." If so, then please provide explicit comments on anything written here and on the pages that follow (e.g., are there other tasks? are there other groups to be contacted?).

Work plan/tasks for perception of poor service survey

First Priority
Identify: - groups to be surveyed - modes to be considered - purpose of surveys - questions to ask - different questions or surveys for different groups or modes - see perception of poor service matrix for question ideas - audience for survey results
Create: - survey instruments for different purposes and groups

Second Priority
Identify: - agencies to perform survey - how to reach target groups - different methods for different groups
Third Priority
Identify: - agencies to analyze results (if different than those performing survey)
Create: - process for administering survey - process for analyzing survey
Perform: - survey of target groups - analysis of survey results
Fourth Priority
Create: - report of survey results - suggestions for improvements in service or perceptions of service
Identify: - agencies responsible for implementing changes

Identification of groups to be surveyed regarding perceptions of poor service

Individuals – users and non-users	
Type of individual	*How they can be contacted*
Elderly	AARP – American Assn. of Retired People
Nursing homes	
Assisted living Groups	
Persons with disabilities	AAPD – American Assn. of People with Disabilities
Employed	Found at large employers
Unemployed	Michigan Works (?)
Walkers	
Bikers	Tri-County Bicycle Association
Retired	AARP
Other?	

Organizations – providers, origins, destinations, or some combination	
Type of organization	*Examples of specific agencies*
MPOs	SEMCOG
Large Employers	MSU
	GM
	Meijer
	Sparrow
	Other?
Nursing Homes	Listed in yellow pages
Assisted living groups	MALA – Michigan Assisted Living Assn.
Hospitals & Healthcare Facilities	Sparrow
	Ingham Regional Medical Center
Retail centers	Meijer
	Walmart
Social service agencies	Michigan League for Human Services
	American Cancer
	Tri-County Office on Aging
	Capital Area Center for Independent Living
	Ingham Community Health Center
	Councils on Aging
Regional Interagency Coordinating Councils (e.g., Capital Area RICC)	
Other?	
Transit authorities	CATA
	SpecTrans (senior citizens, persons with disabilities)
	Eatrans – Eaton county
	Clinton Area Transit System
	Other?
Ride Share Organizations	Michivan (MDOT)
Taxi Services	Listed in yellow pages
Other?	

Issue #3: Funding - Create an inventory of current funding sources, how they can be used and how they are actually distributed.

The action team was provided and reviewed detailed information about traditional transportation funding available at the state and federal level. The team requested additional information about non-motorized/green commuting funding.

See following links
http://www.michigan.gov/mdot/0,1607,7-151-9621_17216_18231---,00.html
http://www.michigan.gov/mdot/0,1607,7-151-9621_17216_18230---,00.html
http://www.michigan.gov/cis/0%2C1607%2C7-154-10573_17393_17408-42667--%2C00.html
http://www.transact.org/library/reports_html/ms2002/exec_sum.asp

The team also discussed that limited organized information available at the federal, state and local level on human services transportation funding. However, the team also discussed that human services funding is not a source of additional transportation funding – since this funding is focused on meeting human services needs - transportation is funded as a means to that end. On the other hand, coordinated human services transportation can create efficiencies that may help expand existing services and the overall mix of mobility options. (See task 4)
The full team did not propose any additional actions on this item.

1. Recommended Task - Search for progressive models in other States.
The team reviewed information about the funding tools used in other states.
The team indicated that funding options being used in other states that may warrant additional review include transportation sales taxes (most likely at the local level), lottery and tolls.

2. Recommended Task - Inventory current local funding options
The action team was told about a December 2002 MDOT Report – Funding Strategy Toolbox for Larger Highway Projects. This report inventories and evaluated local revenue options for larger highway projects. Some of the same options may be useful for transit and other mobility option programs and projects. The team was provided a copy of the report at its September meeting.

The following local funding options included in the report may warrant further review and might be discussed at the October meeting:

- Local motor fuel taxes accommodations taxes
- County real estate transfer tax local motor vehicle registration fees
- Impact fees
- Development exaction

3. Recommended Task - Identify government disincentives for providing maximum funding to mobility options.
Members of the team noted that the federal United We Ride initiative speaks to this item. United We Ride is a broad federal initiative lead by the United States Department of Transportation (USDOT), in partnership with the Departments of Health and Human Services, Education,

Labor, Veterans Affairs, Agriculture and others. There are 62 separate federal programs within 8 different federal departments providing non-emergency, non-military, surface transportation services of some kind to transportation-disadvantaged populations. Twenty-three of the 62 programs are under the jurisdiction of the Department of Health and Human Services. The number, complexity and lack of coordination between these various programs can act as a disincentive to maximizing funding for mobility options.

United We Ride's goal is to improve efficiency of resources through enhanced federal, state and local coordination of human services transportation, and thereby to maintain and even expand current levels of transportation service to transportation-disadvantaged populations.

In February 2004, Governor Granholm, at the invitation of the USDOT, appointed a four member team to represent Michigan at the United We Ride National Leadership Forum in Washington, D.C. The Michigan Departments of Community Health, Transportation and Labor and Economic Growth (Michigan Rehabilitation Services) attended the forum. A representative from the United Cerebral Palsy of Michigan also attended.

Following its participation at the United We Ride Leadership Forum, MDOT, as the lead agency, organized the Michigan United We Ride Workgroup. This group consists of staff representatives from Michigan's Departments of Family Independence, Community Health, Labor and Economic Growth, Education, and Transportation, as well as private sector consumer and advocacy representation from the United Cerebral Palsy of Michigan and the Michigan Association of County Veterans Counselors.

To date, MDOT has hosted seven meetings of the United We Ride Workgroup. As of June 2004, the Workgroup has identified the following actions for further development: a) state sponsorship of brokerage demonstrations; b) developing an interdepartmental common language for cost and measurement of trip service; c) development of local transportation resource directories; d) link ride resources into statewide 511/211 transportation information systems; e) including transportation to work/training issues into coordination planning; f) including consumer perspectives and priorities as a key element in coordination planning; g) identifying federal and state regulatory and funding barriers to improved coordination; and h) determining the value of and if needed, plan for a formal state level coordinating council.

MDOT applied for federal grant to develop a comprehensive State Action Plan for Coordinating Human Service Transportation, using its existing United We Ride Workgroup, as described above. If awarded, grant funds will be used to survey customer, provider, and public viewpoints. The survey will target transportation users and providers, local human service providers, local and statewide advocacy groups and other customers, documenting human service transportation coordination needs, priorities, barriers, service gaps, and existing coordination successes worthy of replication, in various regions of the state. Survey results will be documented and analyzed collaboratively by the United We Ride Workgroup, identifying issues, concerns and individual priorities of customers and local service providers. The results will be incorporated into the Workgroup's overall assessment of coordination needs statewide and be used to develop an action plan for improved coordination of local human service transportation. The full team did not propose any additional actions on this item.

4. Recommended Task - Search for Progressive Models in Michigan

The team reviewed information about recent state legislative proposals to increase funding for public transportation. The most promising source of increased state funding that has been proposed in legislation is found in Senate Bill 387 – Diesel Tax Increase. Senate Bill 387 would amend the Motor Fuel Tax Act to increase the motor fuel tax on diesel fuel and liquefied petroleum gas from 15 cents per gallon to 19 cents. Michigan's diesel tax rate is currently 15 cents per gallon. Michigan's Gasoline tax rate is 19 cents per gallon. Each penny of diesel tax equals $9 million. Expected increase in revenue from a 4 cent tax is $36 million to the MTF, resulting in a $3.6 million increase for the Comprehensive Transportation Fund (the source of state funding for public transportation). A team member indicated the Funding Action Team is looking at the diesel tax issue.

The team did not identify any additional actions on this item.